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User Report

THE CRIMINAL AND INSTITUTIONAL BEHAVIOURS OF PSYCHOPATHS

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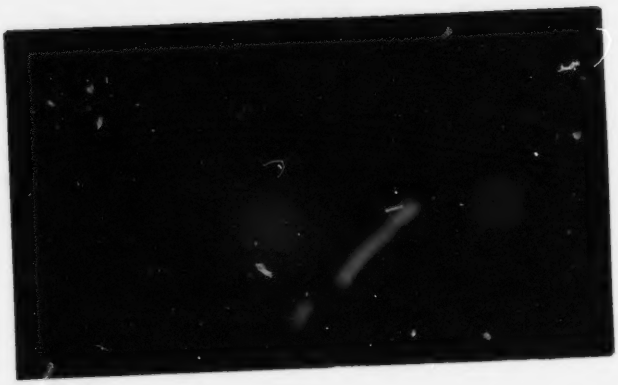

DR. S. WONG
STAFF PSYCHOLOGIST
REGIONAL PSYCHIATRIC CENTRE
SASKATOON
AND
ADJUNCT PROFESSOR
UNIVERSITY OF SASKATCHEWAN

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This working paper is available in French. Ce document de travail est disponible en français.

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ABSTRACT

A random sample (N=315) consisting of 15% of the inmate population in the Prairie Region of the Correctional Service of Canada was selected for the study. The psychopathy checklist developed by Hare and Frazelle (1980) was used to divide subjects into high, medium and low psychopathy groups. The checklists, both the 22-item one and the 15-item short form, were found to be reliable instruments in the selection of psychopathic inmates.

The incidence of psychopathy was between 15 to 30% of the sample, with the maximum security institutions having proportionally more psychopaths. The psychopaths, as a group, had a much more extensive criminal history and a worse institutional record than the group with low psychopathy ratings. The former were also found to have violated parole and mandatory supervision more frequently and have more incidences of unlawfully at large. Contrary to other reports, their persistent criminality appeared to extend well into their late 30s.

INTRODUCTION

The purpose of the study is to systematically investigate the relationship between the degree of psychopathy of a sample of randomly selected federal inmates and their criminal and institutional behaviors.

Although the concept of psychopathy has been around for a long time (Pritchard, 1835), it is only quite recently that serious attempts were made to define it vigorously for diagnostic and research purposes. Cleckley (1976), in the five editions of his book The Mask of Sanity, is most influential in providing a clinical profile of the psychopath. He considers the main features of a psychopath to be superficial charm and good intelligence; absence of delusions and other signs of irrational thinking; absence of nervousness or psychoneurotic manifestations ; unreliability, untruthful, and insincerity; lack of remorse or shame; inadequately motivated antisocial behavior; poor judgement and failure to learn from experience; pathological egocentricity and incapability for love; general poverty in major affective reactions; specific loss of insight; unresponsiveness in general personal relations; fantastic uninviting behavior with drink or sometimes without; sex life impersonal, trivial and poorly integrated; and failure to follow any life plan. In the following discussion, Cleckley's criteria will be used as a first order approximation in the definition of psychopathy.

Karpman (1961) described the psychopath as a callous, immature

person without any emotional depth. He cannot delay the gratification of his immediate need, and future rewards or punishments have very little effect on his behavior. Karpman considered psychopaths to be of either the aggressive-predatory type or the passive-parasitic type. The former often resorts to violence to satisfy his need, the latter tends to be more manipulative and appeals to others by appearing helpless. McCord and McCord (1964), after an extensive review of the literature, concluded that two of the distinguishing characteristics of the psychopath are lovelessness and guiltlessness referring to their lack empathy and remorse. Foulds (1965) and Buss (1966) considered egocentricity and the lack of empathy and affection to be the two major characteristics of psychopathy that could result in their antisocial behavior.

Diagnosis of psychopathy

A number of different methods have been used in the diagnosis of psychopathy and in the selection of subjects for research purposes. These include psychiatric and global assessments, self report personality inventories and check lists based on behavioral criteria.

One of the most widely used psychiatric diagnostic criteria which most closely resembles the syndrome of psychoapthy is the Antisocial Personality Disorder (301.70) according to the American Psychiatric Association (APA) Diagnostic and Statistical Manual, Third Edition (DSM-III). The major characteristics include a history of chronic antisocial behavior beginning before the age of 15 and continuing into adulthood, stealing, fighting, truancy, irresponsible relationship

with family, friends and sexual partners and the inability to sustain lasting close relationships. Using the DSM-III diagnostic criteria, Hare (1980a) found that 39% of a sample of 171 federal inmates were given a diagnosis of Antisocial Personality Disorder by both clinicians.

Global assessments of psychopathy, usually based on Checkley's (1976) description of psychopathy, have also been used. Hare and his colleagues (1978) rated prison inmates' level of psychopathy on a 7-point scale based on an extensive review of the case history data and interviews. He reported that interview reliability of .80 are often obtained. Global assessments have also been shown to correlate highly with DSM-III diagnosis of Antisocial Personality Disorder. The kappa coefficient (Cohen, 1960) for agreement between Antisocial Personality Disorder (307.1) and global ratings of psychopathy was 0.70. When Antisocial Personality Disorder was treated as a dichotomous variable, a significant correlation (biserial r=0.61, df=169, p<.001) with global rating of psychopathy was found (Hare, 1978).

Hare and his colleagues have developed a behavioral checklist for psychopath which has been extensively validated. The checklist consists of 22 items each of which relates to an important behavioral characteristic of psychopathy. The ratings of the items are based on extensive review of the inmates file and a structured interview. High interrater reliability (.82 to .93) and generalizability coefficients (.85 to .89) have been reported (Schroeder, Schroeder and Hare, 1983). It is also highly correlated with global ratings of

psychopathy and diagnoses of Antisocial Personality Disorder in DSM-III (Hare, 1980).

Other investigators, however, preferred to use profiles from self-report inventories rather than rating scales as their operational definition of psychopathy (Blackburn, 1979; Eysenck, 1977; Zuckerman and Link, 1968). The most frequently used self-report scale is the Minnesota Multiphasic Personality Inventory (MMPI). High scores on both the Psychopathic Deviate (Pd) and the Hypomania (Ma) scales are often taken as indications of psychopathy. The Sensation Seeking Scale (Zuckerman and Link, 1968) and the Socialization (So) scale from the California Psychological Inventory (Megargee, 1972) have also been used independently or in conjunction with the MMPI in the selection of subjects.

The two selection methods, with information derived either from institutional files or from self-report inventories, are based on quite different rationales. A selection process using file information is based mostly on a selected sample of the subjects' documented past behaviors and criminal convictions. The self-report inventory approach, however, is based on volunteered information. It has been shown (Cleckley, 1976) that psychopathic behavioral patterns are remarkably stable over time. Information obtained from a comprehensive institutional file should be reasonably representative of past behavior and should also be a good predictor of future behavior. On the other hand, psychopaths have often been described as unreliable and untrustworthy. It is therefore questionable as to whether one could rely heavily on information volunteered by such

individuals. It would appear that there is some a priori basis for favouring the use of institutional file information as the principal source material in the subject selection process.

In a recent study, Hare (in press) reported the interrater agreements and correlations between different procedures for the assessment of psychopathy. Global ratings, checklist ratings, MMPI (Pd and Ma scales scores), CPI socialization scale scores, DSM-III and a self-report psychopathy scale were investigated. Interrater agreements (Kappa coefficient) and interscale correlations were highest among the rating scales (including the DSM-III) and considerably lower for the self-report inventories. Agreement between the clinical-behavioral measures (rating, checklist, DSM-III) and the self-reort measures was, with few exceptions, rather poor.

However, the issue of what is the best subject selection procedure is still a controversial one. Before this issue is resolved, it would be prudent for investigators to define operationally their selection criteria and procedures, and to provide as much information about their subject pool as possible in the published literature. For reasons that will be outlined in detail in the procedure section, in the proposed experiment, subjects will be selected using results of the Psychopathy Checklist (Hare and Frazelle, 1980) based on institutional file information.

The incidence of psychopathy

The incidence of psychopathy in various criminal and prison population has been estimated to vary between 78% (Guze, 1976), to

about 40% using DSM-III Antisocial Personality Disorder diagnostic criteria, to around 25 to 30% based on Hare's (1980a) estimations using selected samples from provincial and federal institutions in Canada (Hare, 1980a).

However, there has not been any systematic study of the incidence of psychopathy in Canadian federal institutions. The present study will attempt to answer this question which is of more than academic interest. There is some evidence to suggest that psychopaths are resistant to treatment interventions and if inmate populations consist predominantly of psychopathic individuals, the appropriateness of the many rehabilitation and treatment programs may have to be modified.

The etiology of psychopathy

A number of theories have been put forward to explain the etiology of psychopathy (see Hare and Schalling, 1978 for review). Hare (1970) and Satterfield (1978) suggested that psychopaths may be suffering from chronic cortical underarousal. Eysenck (1977) and Mednick and Hutchings (1978) have argued, using data from twin and adoption studies, that genetic predispostions may play a significant role in the prediction of psychopathy. Sarason (1978), on the other hand, stressed the importance of environmental influences and proposed that juvenile delinquency and other criminal behaviors may be the manifestations of an undesirable history of cognitive social learning experiences. Hare (1978) also argued that psychopaths may be better able to attentuate aversive sensory inputs and reduced anticipatory fear but are less able to avoid punishments. Among these theories, the

one which proposes that psychopaths have a chronically low level of cortical arousal has received considerable attention. Briefly, the theory proposes that compared to non-psychopaths, psychopaths tend to be cortically underaroused in resting and especially in monotonous situations. As a result, an inordinate amount and a variety of stimulations are required to maintain an optimal level of arousal. In order to maintain that level of arousal, the individual may engage in aggressive, impulsive or even criminal activities. The underarousal hypothesis would also explain the stimulus and sensation seeking characteristics commonly found among many psychopaths.

Other research which suggests the presence of abnormally low levels of cortical arousal in psychopaths are studies of hyperactive children. Robins (1966) reported results from a 30 year follow-up study showing roughly one third of a population of hyperactive children seen at a child guidance clinic was later diagnosed psychopathic. In adult psychopaths, the prevalence of hyperactive symptoms during their childhood were also evident.

Psychophysiological studies (Satterfield and Dawson, 1971) of a sample of hyperactive children have also shown that about 60% to 70% of them showed some evidence of an abnormally low level of cortical arousal. The authors, using the resting skin conductance level, the frequency of spontaneous skin conductance fluctuations, and skin conductance responses as indications of the level of arousal, found an abnormally low level of arousal in a sample of hyperactive children. Furthermore, these children showed a significant decrease in hyperactive symptoms to stimulant medications which increased the

level of cortical arousal.

Criminal history of psychopaths

The criminal histories of psychopaths have been shown to be much more extensive than that of the non-psychopaths (Hare, 1980a). Psychopaths were convicted of significantly more thefts, robberies and assaults but fewer narcotics offences than were non-psychopaths (Hare, 1980a). Psychopaths also have more convictions of violent offences (e.g., assaults, possession of weapon but not murder) than non-psychopaths (Hare and McPherson, in press). Although psychopaths display a consistent pattern of aggressive and violent behaviours, 82.2% of the inmates in the psychopathic group, and only 38.7% of those in the non-psychopathic group, received at least one parole -- a highly significant group difference. However, the reported difference may be due to the fact that psychopaths, as a group, spend more time in prison than non-psychopaths and thus have more opportunity to apply for parole.

The present study will attempt to replicate and extend some of these findings using a representative group of inmates. The reasons for violating various forms of conditional release programs will also be investigated.

Institutional behaviours

Very limited information is available for behaviours of psychopathic inmates within the prison system. Hare and McPherson (in

press) reported that a larger percentage of psychopaths than non-psychopaths, in a sample of inmates from a federal medium security institution, were involved in at least one aggressive act (e.g., verbal threats, fighting, etc.).

In the present study, the institutional behaviours of psychopaths as compared to non-psychopaths will be examined in terms of the number of formal charges they received and the degree of violence and threat used in the commission of these infractions.

PROCEDURE

Subjects

For inclusion in the present study, a total of 315 subjects were selected randomly from eight federal correctional institutions within the prairie region. The eight institutions are Saskatchewan Penitentiary, Saskatchewan Farm Institution, Bowden Institution, Edmonton Institution, Stony Mountain Institution, Drumheller Institution, Rockwood Institution, and the Regional Psychiatric Centre (RPC) in Saskatoon. The 315 subjects represented 15 percent of the population of each of the institutions as listed in the "Current Inmates in Canada" listing published by the Correctional Services of Canada on 14 February, 1983.

The selection procedure is as follows:
For each institution, except the RPC, the names and FPS numbers of all inmates held at the institution were obtained using the "Current Inmates in Canada, 14 February 1983" listing. This document lists inmates alphabetically, as well as, provides the names of the institutions in which they reside. For the RPC, a slightly different subject selection procedure was used. In this case, current inmate listings provided by the institution were used as they were readily available. Thus, eight alphabetized lists were obtained. For each list, the inmates were assigned numbers sequentially from one to N. The numbers one to N were then generated randomly by the computer. The first 30% of the N numbers randomly generated were then matched with the names

of the inmates. This process was repeated for each institution. Thirty percent of the inmates from each institution were identified because it was expected that a number of immates would be excluded from the study for various reasons. Inmate files at the National Parole Board (NPB) Regional Headquarters, Saskatoon were the principal sources of information for data collection.

An inmate was excluded from the sample if he belonged to one of the following groups: (i) he had been diagnosed as having a psychotic disorder (confirmed by a minimum of two psychiatric reports); (ii) he had been transferred out of the Prairie Region -- his file, therefore, unavailable at the Saskatoon NPB office; (iii) he had been transferred within the region prior to April 30th, 1983. If an inmate had been transferred to another institution before May there would likely be reports from that institution. These reports would not be reflective of inmates within the institution in which he had resided and of which we are concerned; (iv) his file had been sent to Ottawa for case analysis -- internal review being part of the appeal process; or (v) his file had been forwarded to Archives (his sentence had expired). A different criterion was used for excluding inmates from the RPC sample. As current listings were used for the RPC, the only exclusion category applicable was (i). The psychiatric diagnosis on admission was used to determine the presence of psychoses. The reasons for exclusion for groups (ii) to (v) are referred to as administrative in Table 1. The experimenter progressed through the randomized lists until the sample totalled fifteen percent of the population for each institution.

In summary, the present sample consists of 15% of inmates randomly selected from each of the eight federal institutions within the Prairie Region.

Data Collection

The National Parole Board (NPB) files at the Prairie Regional Headquarters, Saskatoon were used for data collection. The types of documentation usually available in the NPB files include progress summaries, quarterly reports, psychiatric, psychological and social work reports, community assessments, transfer summaries, and National Parole Board decisions.

A measure of the degree of psychopathy for each inmate in the sample was obtained using the Research Scale for the Assessment of Psychopathy in Criminal Populations (Hare and Frazelle, 1980). Data were also collected on a variety of other variables. These variables included criminal history, family background, institutional behaviour, psychiatric problems, substance abuse history, offense history, availability of familial and community supports. A detailed description of all the variables can be found in the codebook available from the author.

The original intention of this report is to trace the change of criminal and institution behaviors of psychopathic and non-psychopathic inmates over time. This is reflected in the organization of a large part of the data base which has been coded in six year time periods beginning in 1938. However, only a small number of variables can be analysed in this way because of missing information.

Each of the files was rated by two raters to obtain two psychopathy scores for each of the inmates. The final psychopathy score is the mean of the two ratings. All other variables besides the level of psychopathy were rated by one rater.

The NPB files do not usually have detailed documentation of the inmates' institutional offenses. For example, they lack information on the number and nature of the institutional charges and the number of days of lost remission,and other such information is usually not available other than in a general descriptive way. IDRIS files of some of the inmates were accessed from institutions in order to obtained more comprehensive information of their institutional behaviors.

Permission to review the NPB files was obtained from the NPB regional headquarters and clearance to access the inmate's IDRIS files was obtained from the Regional Privacy Co-ordinator.

Psychopathy Rating Scale

A number of instruments have been used by various researchers in the selection of subjects for research purposes. These instruments include global ratings, behavioral check lists, self-report inventories and various combinations of the above. A detailed review of the advantages and disadvantages of the various instruments has been provided by Hare and Cox (1978) and Hare (in press). In summary, they found that global ratings of psychopathy carried out by persons familiar with the concept of psycopathy, are highly reliable. However,

there are usually no explicit behavioral criteria available for making the ratings. As for the use of self report inventory in the selection of subjects, there is conflicting information regarding their validity and the reliability. For the present study, the Psychopathy Rating Scale (PRS) developed by Hare and Frazelle (1980)[1] was used in the selection of subjects for the following reasons:

(1) the items to be rated appear to have the closest conceptual link with the clinical conception of psychopathy;
(2) the summed Check List score has been shown to be highly correlated with clinical ratings of psychopathy and DSM-III diagnosis of Antisocial Personality Disorder;
(3) the ratings can be done based mainly on behavioral and demographic information available in inmate files. Although Hare and Frazelle (1980) also recommended that a brief interview be carried out in conjunction with file reviews to arrive at the final psychopathy score, it will be shown later that file review alone can be used quite satisfactorily without the benefit of an interview; and
(4) there are explicit guidelines available for making ratings.

The PRS (Hare and Frazelle, 1980) consists of 22 items each of which describes an important characteristic of psychopathy. The items are listed in Table 7. Each item can be scored on a 3-point scale,

[1] Requests for reprints of the scale may be directed to Dr. R. D. Hare, Department of Psychology, University of British Columbia, Vancouver, Canada V6T 1W5.

with 0 indicating that the item did not apply to the inmate, 1 indicating some uncertainty about whether or not it applied and 2 indicating that it did apply to him. The 22 items have been factor analysed to yield 5 factors (Hare, 1980b) each of which is meaningful with respect to the concept of psychopathy. The 5 factors together account for 61% of the total variance. For the present study, the files were reviewed independently by two raters who were familiar with the concept of psychopathy and had training in using the rating scale. With the exception of 22 subjects, all files were reviewed by each of the two raters. The 22 files only rated once belonged to inmates who were transferred out of region before the second rater could review them. Interviews were not conducted with any of the inmates.

Data Analysis

The data were analysed using the Statistial Packages for the Social Sciences at the University of Saskatchewan on a DEC-20 computer.

RESULTS

Representativeness of the Sample

Table 1 shows, for each of the eight institutions, the total number of inmate files searched, the number of files excluded from the sample, the reasons for their exclusion and the total number of inmates in the sample. Lower security institutions tend to have a more mobile population and therefore proportionally more inmates were not available for the present study for administrative reasons.

Of the 557 files identified in the initial sample, 242 (43.45%) were excluded either for administrative reasons or because the inmates suffered from mental illness (psychosis). Owing to the large number of files that were excluded, it is important to determine if the final sample is in fact a representative sample of the prairie inmate population and is not biased in any systematic way. In practice, the representativeness of a sample is difficult to determine because population parameters are usually not available for comparison with the sample. This is not the case for the population in question. Some parameters of the populations at each of the eight institutions (e.g., age ranges, racial origins, etc.) are available in official publications. As such, comparisons between the samples and the populations can be made using these variables. If the sample is representative of the population, the values of the variables derived from the sample and the population should theoretically be identical. In practice they are usually not, but nevertheless, they should not be

Table 1.

Reasons for Exclusion of Inmates from Original Random Sample.

Institutions	No. of inmate files searched	No. of inmates excluded and reasons for exclusion		No. of inmates in sample
		Mental Illness	Administrative	
Sask. Farm	29	0	18	11
Rockwood	53	1	39	13
Bowden	51	0	24	27
Drumheller	124	2	47	75
Stony Mountain	118	0	41	77
RPC (Prairies)	27	14	0	13
Sask. Pen.	104	2	33	69
Edmonton	51	1	20	30
Total	557	20	242	315

significantly different. If they are, then one would question the representativeness of the sample. Such comparisons were made in the present study and the results are shown in Table 2, 3, 4, and 5.

In Table 2, the mean ages of inmates for the sample and the population (in brackets) are given for each of the eight institutions. The mean ages for the population of each of the institutions were obtained from the "Population Profile Report," Correctional Services of Canada, March 3, 1983. Since only age ranges were given in the Population Profile Report, the median age within each age range is taken as the mean population age for comparison purposes. The mean age of the population is, therefore, an approximation and no statistical comparison can be made between the mean ages of the populations and the samples. However, as can be seen from Table 2, the mean ages of the sample and the population are quite similar with the exception of Rockwood Institution, the significance of which will be discussed in a later section.

Further comparisons between the racial origins of the sample and population were made and the results are shown in Tables 3, 4 and 5.

Table 3 shows the proportion (in percent) of inmates of different racial origins in the sample for each of the eight institutions.

Table 4 shows the proportion (in percent) of inmates of different racial origins for the population of each of the eight institutions as obtained from the population profile report.

Table 5 is a summary of Table 3 and 4 showing, for both the populations and the samples, the proportion of inmates that can be

Table 2.

Mean Ages of Inmates from the Eight Institutions.

Institutions	Mean Age (in years)		Standard Deviation	Range
Sask. Farm	32.00	(31.27)*	7.64	20 - 50
Rockwood	39.62	(33.49)	11.08	23 - 63
Bowden	33.70	(31.82)	12.72	19 - 70
Drumheller	27.84	(27.74)	7.96	18 - 56
Stony Mountain	28.71	(28.44)	8.85	17 - 53
RPC (Prairies)	32.31	(28.89)	13.83	20 - 64
Sask. Pen.	31.57	(31.02)	9.23	17 - 54
Edmonton	29.83	(29.21)	7.46	22 - 57
Total	30.38		9.61	17 - 70

*Mean age of inmates adapted from "Population Profile Report", Correctional Service Canada, March 31, 1983.

Table 3.

Racial Origin of Sample Inmates Within the Eight Institutions.

Institutions	Race(in percent) Caucasian	Indian	Metis	Negroid	Asiatic	Inuit	N
Sask. Farm	72.73	27.27	0.00	0.00	0.00	0.00	11
Rockwood	38.46	61.54	0.00	0.00	0.00	0.00	13
Bowden	77.78	14.82	3.70	0.00	0.00	3.70	27
Drumheller	76.00	16.00	5.34	1.33	1.33	0.00	75
Stony Mountain	61.04	23.38	12.98	1.30	1.30	0.00	77
RPC (Prairies)	84.62	7.69	7.69	0.00	0.00	0.00	13
Sask. Pen.	71.02	11.59	13.04	2.90	0.00	1.45	69
Edmonton	76.67	10.00	10.00	0.00	3.33	0.00	30
Total	70.16	18.10	8.89	1.27	0.97	0.63	315

Table 4.

Racial Origin of Inmates for the Eight Institutions. From "Population Profile Report", Correctional Service Canada, March 31, 1983

	Race (in percent)							
Institutions	Caucasian	Indian	Metis	Negroid	Asiatic	Inuit	Other	Not Stated
Sask. Farm	65.44	20.99	7.41	1.23	1.23	0.00	2.47	1.23
Rockwood	62.26	24.53	5.66	0.94	0.00	0.00	1.89	4.72
Bowden	75.61	11.59	4.88	0.00	1.22	1.83	3.04	1.83
Drumheller	64.12	18.06	8.33	2.55	0.93	0.69	3.93	1.39
Stony Mtn.	56.98	23.11	12.82	0.46	1.14	0.00	1.83	3.66
RPC (Prairies)	75.00	11.36	10.22	0.00	0.00	1.14	1.14	1.14
Sask. Pen.	66.84	17.62	8.55	2.59	0.52	0.78	1.29	1.81
Edmonton	66.67	16.94	11.47	0.55	0.00	0.55	2.73	1.09

Table 5.

Racial Origins of the Inmate Samples and Inmate Populations for the Eight Institutions.

Institutions	Race (in percent) Caucasian	*	Others		X^2	**
Sask. Farm	72.73	(65.44)	27.27	(34.56)	1.24	n.s.
Rockwood	38.46	(62.26)	61.54	(37.74)	11.33	p<.05
Bowden	77.78	(75.61)	22.22	(24.39)	0.13	n.s.
Drumheller	76.00	(64.12)	24.00	(35.88)	3.36	n.s.
Stony Mtn.	61.04	(56.98)	38.96	(43.02)	0.34	n.s.
RPC (Prairies)	84.62	(75.00)	15.38	(25.00)	2.87	n.s.
Sask. Pen.	71.02	(66.84)	28.98	(33.16)	0.41	n.s.
Edmonton	76.67	(66.67)	23.33	(33.33)	2.46	n.s.

* Figures in brackets are from "Population Profile Report" Correctional Service Canada, March 31, 1983.

** n.s. = not significant

classified as either Caucasian or others (all racial origins other than Caucasian) for each of the eight institutions. Chi-square tests were done for each of the eight institutions to determine if there were any significant differences between the samples and the populations in terms of the proportion of inmates of different racial origins. No significant difference was found with the exception of, once again, Rockwood Institution.

Two inferences can be drawn from the above analyses:

(1) the populations and the samples do not appear to be significantly different from each other in terms of mean age and racial origin for all institutions except Rockwood.

(2) the Rockwood sample appears to be a non-representative sample in terms of mean age and racial origin.

The Rockwood sample consists of only 13 subjects which is 4.12% of the total sample. It is felt that although the sample appears to be biased, the small number of Rockwood inmates should not significantly affect conclusions drawn using the entire sample of 315 subjects. Caution, however, should be exercised when the Rockwood sample is considered on its own. In summary, the results of these analyses indicate that the sample of the 315 subjects is representative of the populations in question.

Demographic characteristics of the sample

For the age distribution and the racial composition of the sample, please refer to table 2 and 3. Other demographic information are shown in Table 6.

Psychopathy Rating Scale

1. Interrater reliability

Scores on the 22 item rating scale are available on 293 files from both raters. The Pearson product-moment correlation of the two sets of scores is 0.85 (df=292, p<.001). It appears that there is a high degree of interrater reliability in making the ratings.

2. Interrater reliability of ratings for each of the 22 items

Kendall's rank order correlations (tau) of the two raters' score of each of the 22 item were calculated in order to determine the interrater reliability of the ratings of each item. They are listed in Table 7.

All the 22 correlations are significant at the .001 level. The results suggest that good interrater reliability exists for all 22 items.

Table 6.

Demographic Characteristic of the Sample.

	Mean	S.D.	N
Age	30.38	7.61	315
Years of education before incarceration	9.22	7.04	313
Birth order	2.61	1.85	214
Age first left home	16.56	3.11	118
Number of siblings	4.37	3.39	277
Number of offsprings	0.96	1.42	308
Age of first adult offence	19.60	6.77	314
Number of offences	18.82	24.36	315
Number of institutional offences	3.33	5.84	315
Number of offences per year free	2.96	3.51	315

Table 7.

Interrater Correlations for Each of the 22 Items of the Psychopathy Rating Scale.

Rating Scale Item Number	Kendall's tau
1. Glibness/superficial charm	.43
2. Previous diagnosis as psychopath (or similar)	.53
3. Egocentricity/grandiose sense of self worth	.36
4. Proneness to boredom/low frustration tolerance	.24
5. Pathological lying and deception	.41
6. Conning/lack of sincerity	.57
7. Lack of remorse or guilt	.50
8. Lack of affect and emotional depth	.45
9. Callous/lack of empathy	.21
10. Parasitic lifestyle	.46
11. Short-tempered/poor behavior controls	.37
12. Promiscuous sexual relations	.41
13. Early behavior problems	.48
14. Lack of realistic long term plans	.23
15. Impulsivity	.32
16 Irresponsible behavior as a parent	.56
17. Numerous marital relationships	.31
18. Juvenile delinquency	.61
19. Poor probation or parole risk	.49
20. Failure to accept responsibility for own actions	.32
21. Multiple type of offences	.52
22. Drug/alcohol abuse not direct cause of antisocial behavior	.43

3. The use of the Psychopathy Rating Scale without interviewing the inmate

In the manuscript outlining the use of the rating scale (Hare and Frazelle, 1980), it is suggested that a loosely structured interview be conducted with the inmate to supplement information that may not be available from reviewing the file. However, in the present study and perhaps in other research setting as well, to obtain an interview with the inmate for an hour or so may not always be possible. Therefore, it is also the purpose of this study to determine whether the rating scale can be used for the purpose of the selection of psychopathic subjects without the benefit of the interview.

Using a separate group of federal inmates available at the RPC (Prairies), each of two raters first reviewed the files of 31 inmates according to the criteria set out on the Psychopathy Rating Scale and assigned each of them a score. An interview was then conducted as suggested in the manuscript (Hare and Frazelle, 1980) and a final score based on file review and interview was obtained.

The means of the scores with file review alone and with file review plus interview are 22.04 (SD=6.85) and 22.48 (SD=6.88) ($t=1.32, df=55, p<0.19$) respectively. Interrater reliability for file review alone and for file review plus interview are 0.74 ($p<.001$) and 0.81 ($p<.001$) respectively. The results suggest that good interrater reliability can be obtained using file review alone. The mean ratings with and without interview are almost identical and highly correlated ($r=0.93$, $p<.001$).

Quite often, research involved identifying groups of inmates (e.g., those with high, medium and low levels of psychopathy) and usually the group membership is then based on a system of cut-off scores. Although mean scores obtained with and without interview are almost identical, it is still possible that using the interview may increase scores for some cases and decrease scores for others without affecting the mean score. To test for this possibility, cut-off scores for groups of high and low psychopathy inmates are set at 20 and 30 respectively. Inmates with scores equal or less than 20 are put in the low group and those with 30 or higher in the high group; those in between, the medium group. Using these as cut-offs, the number of cases that change group membership when the interviews are used in conjunction with the file reviews can be computed.

Using the above procedure, it was found that, of the 31 cases, the scores of 14 cases increased and 12 decreased with the interview. Five remain unchanged. The mean increase in score is 2.2 and the mean decrease is 1.5. A total of 8 cases (out of 31) changed group membership. Five moved from the medium to the high group, 1 from the low to the medium and 2 from the medium to the low group. No case moved from one to the other extreme group. In short, 6 moved up and 2 moved down by no more than 1 group. It suggests that using file reviews alone to determine psychopathy ratings does not lead to drastic changes in group membership, but there appears to be a tendency to underestimate rather than overestimate scores. Cases that have higher scores appear to be underestimated more often. The data were further analysesd by dividing scores obtained by file review

alone into those higher or lower than the mean of 24. For those scores equal or less than 24, 4 increased, 8 decreased and 2 remained the same with the interview. For those equal or greater than 25, 10 increased, 4 decreased and 3 remained the same (chi square=3.8, $p<.05$). The overall results suggest that the mean psychopathy scores obtained with or without interview were not significantly different, while scores obtained by file review alone tended to underestimate the size of the two extreme groups. Using file reviews alone to select subjects appears to yield more conservative estimates of both high or low levels of psychopathy.

4. The abbreviated fifteen (15) item Psychopathy Rating Scale

It was suggested by Hare (cited in Howard, Bailey and Newman, in press) that the 22 item Psychopathy Rating Scale could be shortened to 15 items without sacrificing the reliability of the summed psychopathy scores. The 15 items are 1, 3, 5, 6, 7, 8, 9, 11, 12, 13, 14, 17, 19, 20, and 21 (refer to Table 7 for descriptions of the items). The Pearson product-moment correlation between the 22 and 15 item rating scale is highly significant ($r=0.96$, $df=314$, $p<.001$). The 15 item rating scale can therefore be used instead of the 22 item one and is almost as reliable.

Psychopathy ratings of the sample

1. Psychopathy scores by raters

All except 22 files were reviewed by 2 raters each of whom independently assigned the inmate a psychopathy rating after reviewing the whole file. The 22 files were unavailable to the second rater for administrative reasons. The mean ratings (N=293) for Raters 1 and 2 are 25.25 (S.D.=5.83) and 25.10 (S.D.=6.08), respectively and are not significantly different ($t=0.77$; $p<0.44$). In subsequent analyses, the psychopathy rating for each inmate will be the mean of the two raters. For the 22 cases, only the one rating will be used.

2. Psychopathy ratings by institutions

The mean psychopathy scores for each of the 8 institutions are shown in Table 8. A oneway analysis of variance, using psychopathy scores as the dependent measure and institution as the independent, yielded a significant F-ratio ($F=3.50$, $df=7/307$, $p<0.001$). The frequency distribution of the psychopathy ratings for each of the 8 institutions are shown in Table 9. The frequency distribution of the psychopathy scores for the total sample (N=315) is shown in Fig. 1.

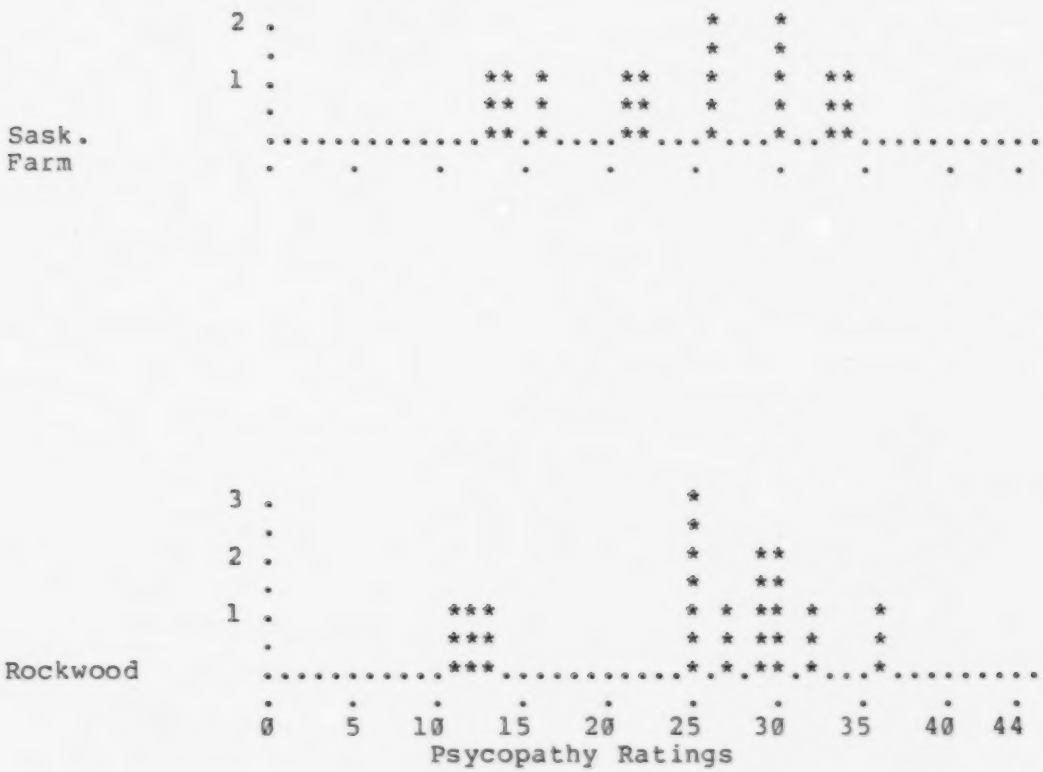
Table 8.

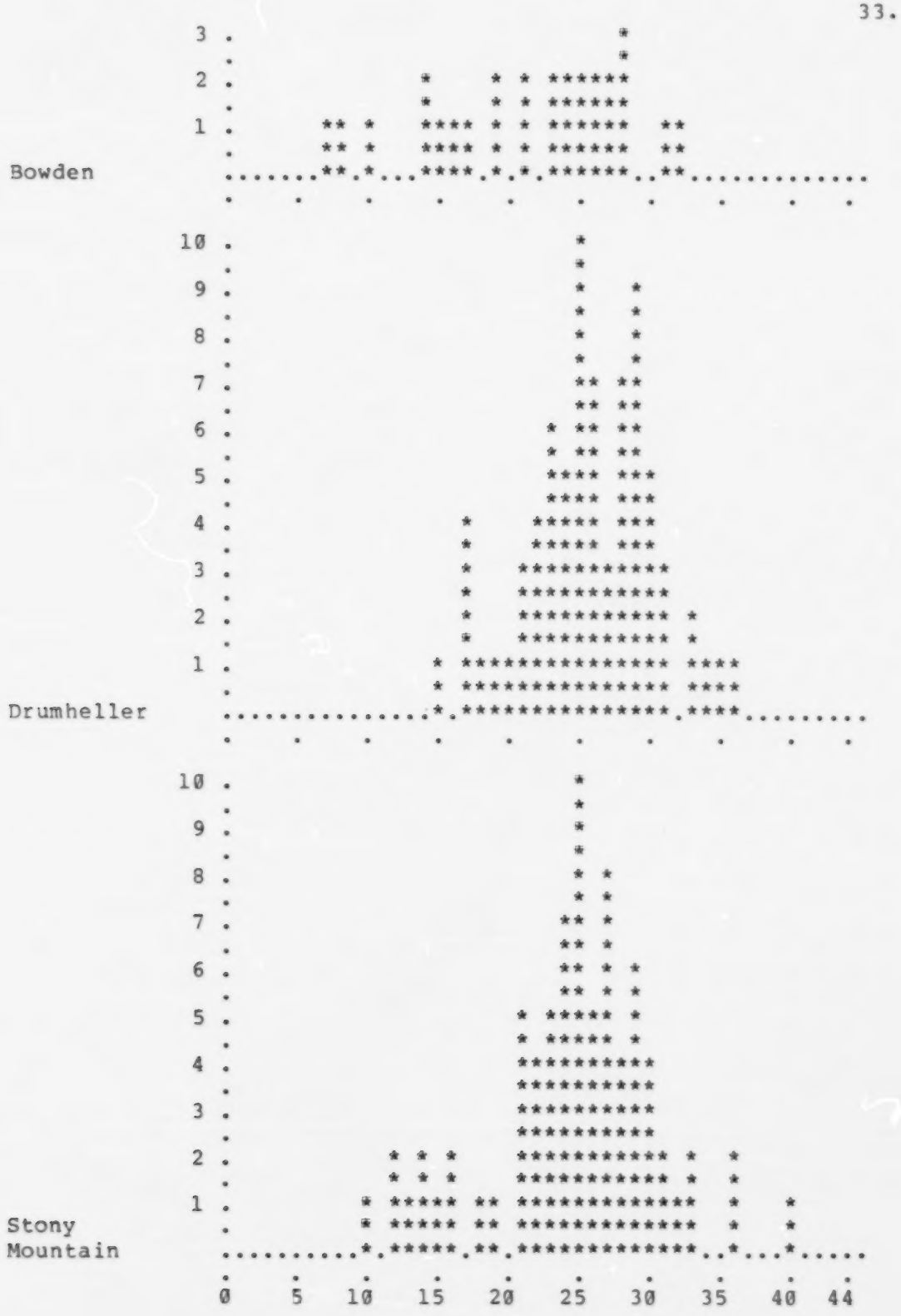
Mean Psychopathy Ratings for the Eight Institutions.

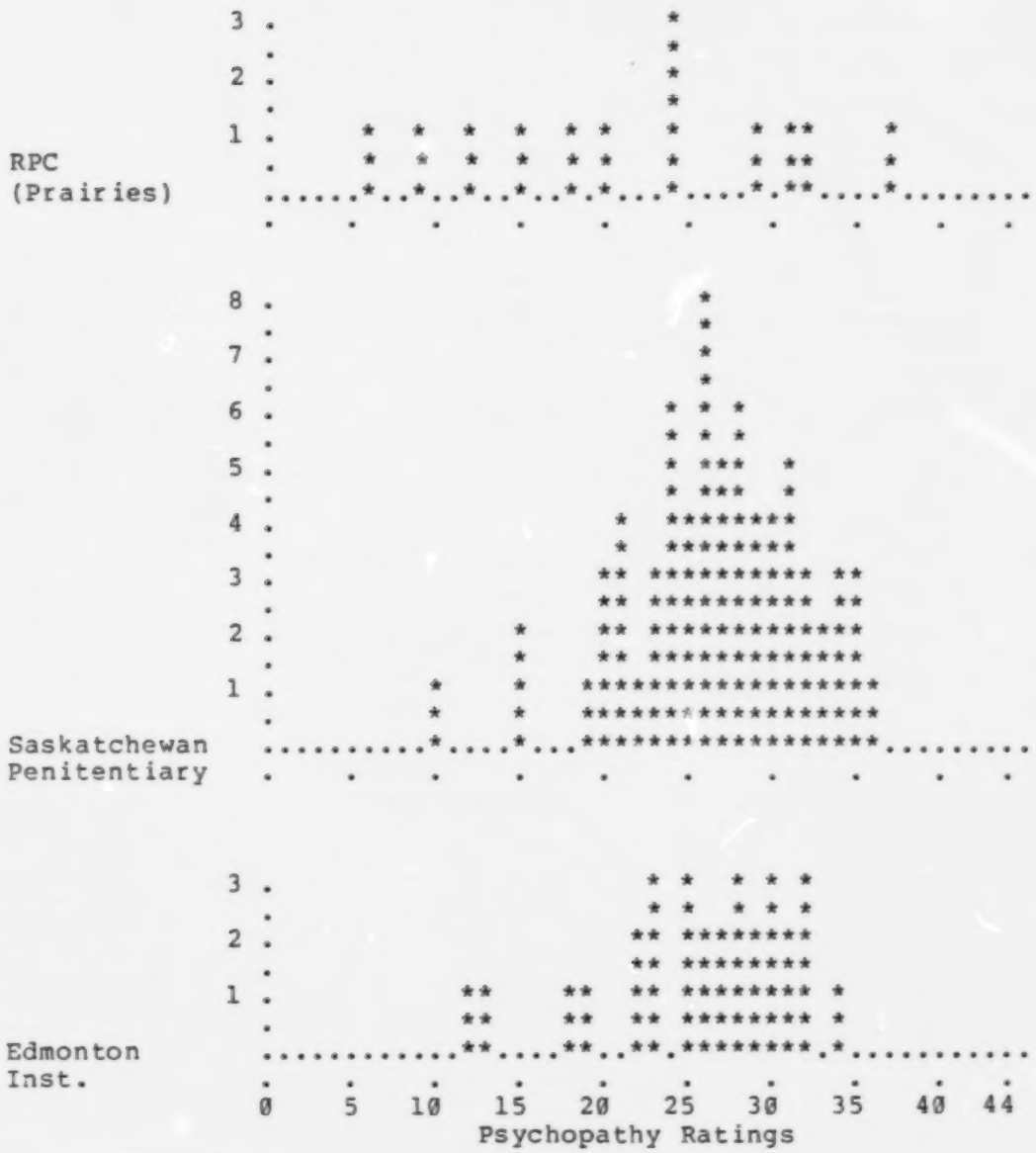
Institutions	N	%	$\bar{X}$	S.D.	RANGE
Sask. Farm	11	3.5	24.32	7.59	13.0 - 34.5
Rockwood	13	4.1	25.19	7.89	11.5 - 36.0
Bowden	27	8.6	21.63	6.70	7.5 - 32.0
Drumheller	75	23.8	26.02	4.36	15.5 - 36.0
Stony Mountain	77	24.4	24.97	5.59	10.5 - 40.0
RPC(Prairies)	13	4.1	21.81	9.46	6.0 - 37.5
Sask. Pen.	69	21.9	26.95	5.07	10.5 - 36.5
Edmonton	30	9.5	26.23	5.40	12.0 - 34.0
Total	315	100.0	25.34	5.85	6.0 - 40.0

Table 9

Frequency Distribution of Psychopathy Ratings for Each Institution




Bowden
Drumheller
Stony Mountain
0 5 10 15 20 25 30 35 40 44


RPC
(Prairies)
Saskatchewan
Penitentiary
Edmonton
Inst.
0 5 10 15 20 25 30 35 40 44
Psychopathy Ratings

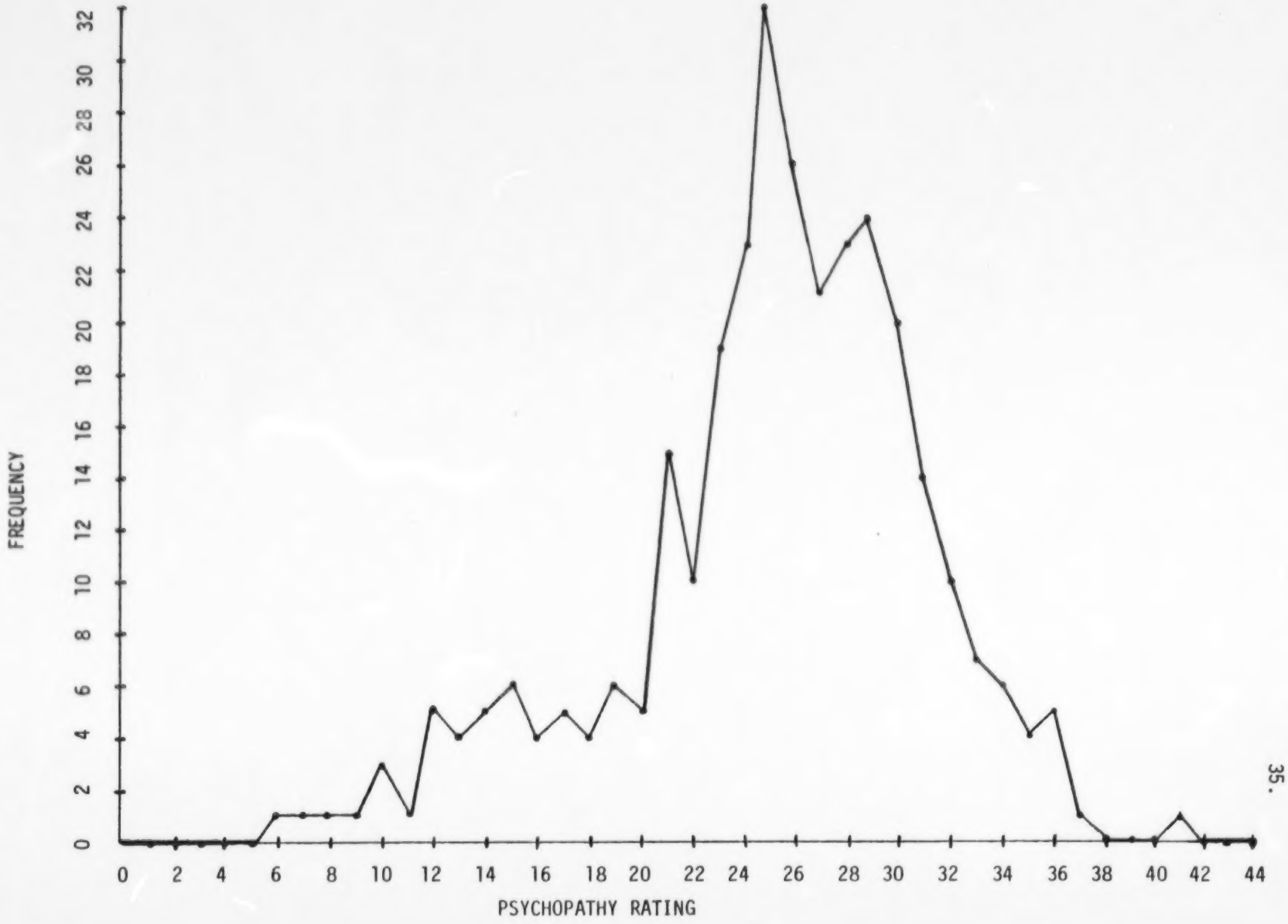


Figure 1. Frequency of Mean Psychopathy Ratings.

Selection of low, medium, and high psychopathy groups

Quite often, research requires the selection of subjects with low, medium, and high levels of psychopathy. A series of cut-off scores are then used to assign subjects to the desired groups. There is no good a priori reason for using any particular score as the cut off point. The investigator has to decide, based upon his/her own requirements, what is the desired composition of the group. More extreme cut off scores will produce purer groups and vice versa. Based on the above data, it is suggested that psychopathy scores of 20 and 30, each of which is approximately 1 standard deviation below and above the mean, may be used as cut-off scores for the low and high group respectively. Applying the above criteria to the present study, yielded 16.51% (52), 61.90% (195) and 21.59% (68) of the total sample as the low, medium and high psychopathy group respectively. It should be noted that given a certain frequency distribution, the incidence of psychopathy so calculated depends largely on where the cut off point is set and is therefore arbitary to some extent. However, data presented later will show that the two extreme groups so selected, also differ in many variables that have been shown by previous studies to discriminate psychopaths from non-psychopaths. Table 10 shows the distribution of inmates according to low (0 - 20), medium (21 - 29) and high (30 - 44) levels of psychopathy for each of the eight institutions.

The percentage of inmates in the high psychopathy rating group varies from about 7% to over 36% depending on the institution in

Table 10.

Number of Inmates with Low, Medium and High Psychopathy Ratings from the Eight Institutions.

	LOW (0-20)		MEDIUM (21-29)		HIGH (30-44)		
Institutions	N	%	N	%	N	%	TOTAL
Sask. Farm	3	27.28	4	36.36	4	36.36	11
Rockwood	3	23.08	6	46.15	4	30.77	13
Bowden	10	37.04	15	55.55	2	7.41	27
Drumheller	8	10.67	54	72.00	13	17.33	75
Stony Mtn.	11	14.29	54	70.13	12	15.58	77
RPC(Prairies)	6	46.15	4	30.77	3	23.08	13
Sask. Pen.	7	10.14	41	59.42	21	30.44	69
Edmonton	4	13.33	17	56.67	9	30.00	30
TOTAL	52	16.51	195	61.90	68	21.59	315

question. Those in the low psychopathy group vary from just over 10% to over 46%. The security level as well as the function of the institution (e.g., protective custody) and the relative size of the sample in each institution would most likely affect the distribution of the inmates with different psychopathy ratings.

The high, medium and low psychopathy groups and other variables

1. Security levels of institutions

Further analyses were done to examine the relationship between the three groups and the security levels of the institutions from which the inmates were selected. The results are presented in Table 11.

The proportion of inmates in the high psychopathy group varies from just over 15% in the medium security institutions to almost 30% in the maximums. Hare (1980a) estimated an incidence of psychopathy of 25 to 30% in Canadian penitentiaries. The number of inmates at the minimum security institutions is too small for a reliable estimate. Furthermore, as indicated earlier, the sample from Rockwood, a minimum security institution, does not appear to be a representive one. A chi-square test shows a significant association between the 3 levels of psychopathy ratings and maximum and medium security levels with proportionally more inmates in the high psychopathy group being housed in maximum security institution (chi square=8.89, df=2, $p<0.01$).

Table 11.

Number of Inmates with Low, Medium and High Psychopathy Ratings by Security Levels of the Institution.

	LOW (0-20)		MEDIUM (21-29)		HIGH (30-44)		
SECURITY LEVEL	N	%	N	%	N	%	TOTAL
MAXIMUM *	17	15.18	62	55.36	33	29.46	112
MEDIUM **	29	16.20	123	68.72	27	15.08	179
MINIMUM ***	6	25.00	10	41.67	8	33.33	24
TOTAL	52	16.51	195	61.90	68	21.59	315

* RPC (Prairies), Saskatchewan Penitentiary, and Edmonton Institution

** Bowden, Drumheller, and Stony Mountain

*** Saskatchewan Farm Institution and Rockwood

Using the same cut-off scores, the mean psychopathy scores were computed for inmates from the high, medium and low security institutions. The results are shown in Table 12. A oneway analysis of variance shows that the difference of the mean psychopathy scores for the three security levels are significant ($F=3.63$, $df= 2/299$, $p<.03$). Individual comparisons using the Scheffe's test show that only the mean scores for the medium and the high security inmates are significantly different at the .05 level. The results suggest that there is a small but significant difference in the level of psychopathy of inmates from medium and high security institutions.

Differences between the low (L) and high (H) psychopathy groups

Of particular interest to the present study is the differences between groups of inmates with low and high ratings of psychopathy on a number of demographic and behavioral variables.

1. Racial background

The racial backgrounds of all inmates are categorized as (1) Caucasian, (2) North American Indian, (3) Metis, (4) Inuit, (5) Asiatic, or (6) Negroid. The Asiatic and Negroid groups only constitute 2.24% of the total sample and are left out in the present analysis. The second, third, and fourth group were collasped into a single "Natives" group. No significant relationship between H and L psychopathy group and race (Caucasian vs Native) was found (chi square= 1.72, df=1, ns). As such, in the rest of the analyses, no distinction between Native and Caucasian will be made.

Table 12.

Mean Psychopathy Ratings and Security Levels of Institutions.

	Mean Psychopathy Ratings		
Security Level	N	$\bar{X}$	S.D.
Maximum	112	26.16	5.97
Medium	179	24.91	5.47
Minimum	24	24.79	7.60
	315	25.35	

*Inmates from RPC were not included in the comparison as it is a multi-level institution.

2. Age and education

There is no significant difference between the mean age of the LP (32.23) and HP (31.74) groups (t=0.26, df=118, p>.79) and the mean number of years of education they had prior to incarceration ($\bar{X}$=9.37, 9.10 respectively; t=0.53, df=117, p>.50).

3. Home situation and upbringing

There is no difference between the mean birth order or the mean number of siblings between the HP and the LP groups. Refer to Table 13 for details of the mean values and the statistics. Although the number of marital or common-law relationships did not differ significantly between the two groups, the HP group had significantly smaller number of offspring than the LP group. The HP groups also left home at an earlier age than the LP group. There is no difference between the two groups in terms of whether or not they had been abused as a child (chi square=1.99, df=1, p>.15), but a significant association exists with the HP group showing a higher incidence of early behavioral problems (chi square=5.58, df=1, p<.006).

The primary care takers were identified as individuals who looked after the welfare of the inmate for at least 10 years while he was growing up. They were divided into two categories for the analysis: one or both biological parents and all others. A significantly higher proportion of inmates in the HP group tended to be raised by an individual other than their biological parents (chi square=4.0, df=1, p<.03).

Table 13.

Comparison of High and Low Psychopathy Groups on Family and Background Variables.

Variable	Group	N	$\bar{X}$	t	df	p
Birth order	LP	38	2.68			
	HP	47	2.53	.34	83	ns
No. of siblings	LP	46	4.65			
	HP	61	4.08	.79	105	ns
No. of offspring	LP	51	1.51			
	HP	67	.90	2.14	116	<.04
No. Common law or marital relationship	LP	52	1.10			
	HP	65	1.12	.16	115	ns
Age left home	LP	16	17.38			
	HP	31	15.58	1.72	45	<.05 (one-tailed)

All probability levels in this and subsequent analysis are two-tailed except where indicated.

4. Juvenile and criminal history

The age of first offense of the HP group is significantly lower than that of the LP group. Refer to Table 14 for details of the mean values and the statistics. The total number of offences of the HP group is significantly higher than for the LP group. The number of known aliases is also significantly larger for the HP group. There is no significant difference between the two groups on the age of first substance abuse. There is a highly significant association between the HP group and the reported presence of juvenile delinquency before age 15 (chi square=39.66, df=1, $p<.00001$). The HP group spent almost three times as much time in prison compared to the LP group, although there is no significant difference between the mean ages of the two groups.

The mean number of offences per year while free in the community committed by the LP and the HP groups are significantly different. The HP group committed almost four times as many offences as the LP group per year while they were not incarcerated.

Inmates in the HP group committed almost four times as many institutional offences as those in the LP group. The difference is significant. Each of the institutional offences was rated on a 3-point scale on both the degree of violence and threat involved during the commission of the offence. Inmates in the HP group used significantly more threats and violence. (See Table 14).

Table 14.

Comparison of High and Low Psychopathy Groups on Offence Variables.

Variable	Group	N	$\bar{X}$	t	df	p
Age of 1st offence	LP	52	24.10			
	HP	68	17.79	4.55	118	<.001
Total no. of offences	LP	52	6.77			
	HP	68	24.97	5.84	118	<.001
Mean no. of offences per year free	LP	52	1.95			
	HP	68	4.37	3.10	118	<.002
Number of known aliases	LP	52	0.09			
	HP	67	0.33	2.11	117	<.04
Age of 1st substance abuse	LP	8	14.62			
	HP	12	13.75	.78	18	ns
Time incarcerated (years)	LP	52	2.61			
	HP	68	7.43	6.76	118	<.001
Total number of institutional offences	LP	52	0.73			
	HP	68	6.35	4.37	118	<.001
Mean rating of violence	LP	21	0.79			
	HP	27	1.46	3.37	46	<.002
Mean rating of threat	LP	21	0.61			
	HP	27	1.14	4.70	46	<.001

5. Conditional releases

There is a positive correlation between psychopathy ratings and the total number of parole applications ($r=0.30$, $p<.0001$). Inmates with higher psychopathy ratings submit more parole applications. Comparison between the mean number of applications of high and low psychopathy groups showed that those in the HP group made significantly more applications (2.54) than did the LP group (0.75) ($t=4.70$, $df=118$, $p<.001$). This may be due partly to the fact that those in the HP group tend to spend more time in jail and therefore, made more applications. However, the granting or not granting of parole to an inmate is not contingent on whether or not they belong to the HP or LP group (chi square=0.21, $df=1$, $p>.65$). In the above analysis, the Ns for the high and low psychopathy groups were 40 and 13 respectively which represents the inmates' first parole application. A further analysis was done comparing all parole applications made by the high and low psychopathy group and the outcomes ($N=125$, 20 respectively; N now refers to the total number of applications made by each of the two groups). The result again indicates no significant relationship between psychopathy group membership and outcome of parole applications (chi square=2.0, $df=1$, $p>.1$). The results suggest that psychopaths are just as likely to be granted parole as non-psychopaths.

There is a positive correlation between psychopathy ratings and the number of parole revocations ($r=0.30$, $p<.001$). The mean number of parole revocations is also significantly larger for the high than the low psychopathy group ($\overline{X}=0.75$ and .02 respectively; $t=4.71$, $df=118$,

p<.001). However, there is no significant relationship between psychopathy ratings and the the mean time between release on parole and revocation (r=-0.02, ns). Whereas only one inmate in the LP group violated parole, there were a total of 30 separate incidents of parole violation within the HP group.

Of the 30 inmates in the HP group who had their parole revoked for the first time, 24 reoffended, 3 breached the condition for parole and 3 forfeited parole. The lone inmate in the LP group had his parole revoked because of a breach of the condition for parole. Over the course of their incarceration up to the time of the study, 10 inmates in the HP group received 2 parole revocations, 8 received 3 revocations, and 3 received 4 revocations. The frequencies of reasons for revoking paroles for the total sample are given in Table 15.

The data suggest that compared to non-psychopaths, psychopaths violated parole more often and for more serious reasons. However, despite their rather notorious parole performances, they were just as likely to be granted parole.

6. Mandatory supervision (MS) revocation

There is a positive correlation between psychopathy ratings and the number of revocations during MS (r=0.23, p<.001). The high psychopathy group also shows a significant larger mean number of MS revocations than the low psychopathy group ($\bar{X}$=0.63, 0.02 respectively; t=4.88, df=118, p<.001). The N is not large enough for the analysis of the time between release and revocation. The reason is that whereas in the LP group, there was only one inmate who had his MS revoked, there were

Table 15.

Reasons for Terminating Parole.

Reason	Frequency
Breach of condition	4
Forfeit	11
Reoffended	36
	51

29 inmates in the HP group who had at least one MS revocation. Of the 29 inmates, 25 reoffended, 3 breached the condition and 1 forfeited MS. Nine inmates in the HP group had 2 MS revocation, 5 had 3; all were revoked for reoffending. The results, comparing the LP and the HP groups on MS revocations closely resembled that for parole revocations. Inmates in the HP group violated MS much more frequently and for more serious reasons.

7. Incidences of unlawfully at large (UAL)

There is a small but positive correlation between the number of incidents of the inmate being UAL and ratings of psychopathy ($r=0.26$, $p<.001$). The high psychopathy group has a significantly larger mean number of UALs compared to the low psychopathy group ($X=0.97$, 0.17 respectively; $t=4.34$, df=, $p<.001$). Only 13.5% of the LP group as compared to 50% of the HP have one or more UALs (chi square=15.90, df=1, $p<.0001$). Nobody in the LP group had 3 or more UALs compared to 13.3% of the HP group. Two inmates in the HP group had a total of 6 UALs each. While only 1 out of 7 UALs for the LP group occurred during a conditional release or MS, over 45% (26 out of 57) of the UALs for the HP group happened during a conditional release. There is no significant correlation ($r=-0.02$, ns) between the length of time the inmate was UAL and psychopathy ratings.

8. Transfers between institutions

There is a significant correlation between the number of transfers from institution to institution and the psychopathy ratings ($r=0.30$, $p<.001$). The mean number of transfers is significantly higher

for the high compared to the low psychopathy groups ($\bar{X}$=4.77, 1.56 respectively; t=4.46 df=118, p<.0001). See Table 16 for a summary.

9. Psychiatric diagnosis

There is a small but significant positive correlation (r=0.16, p<.006) between psychopathy ratings and the number of psychiatric assessments that the inmates received. Compared to the LP group ($\bar{X}$=.62), the HP group ($\bar{X}$=1.18) received a significantly larger number of psychiatric assessments over their current period of incarceration (t=1.03, df=118, p<.05, one-tailed). The first psychiatric diagnoses that the two groups received after they were incarcerated are shown in Table 17.

There is a highly significant association between a high psychopathy rating and the diagnosis of antisocial personality disorder (chi square=11.47, df=2, p<.004). A number of inmates in both the HP and the LP group received more than one psychiatric assessment. The diagnoses from all the psychiatric assessments the two groups receive up to the time of the study are shown in Table 18. The data suggest that compared to the LP group, the HP group had more than their fair share of psychiatric assessments and, on the whole, they received the correct diagnosis of antisocial personality disorder.

10. History of suicide attempts and blackouts

There is no significant association between psychopathy group membership and the presence of self reported history of suicide attempts (chi square=2.6, df=1, p>.10) or "blackouts" (chi square =.75, df=1, p>.38).

Table 16.

Correlations Between Mean Psychopathy Ratings and Other Variables.

Variable	N	Pearson's r	p
No. MS Revocations	315	0.23	<.001
Time between MS and First Revocation	70	-0.06	ns.
Mean Time between MS Releases and Revocations	70	-0.05	ns.
No. Parole Applications	315	0.30	<.001
No. Parole Revocations	315	0.30	<.001
Time between Parole Release and First Revocation	83	-0.003	ns.
Mean Time Between Parole Releases and Revocations	83	-0.02	ns.
No. UAL's (Unlawfully-at-large)	315	0.30	<.001
Amount of Time on First UAL	61	0.12	ns.
Mean Time UAL	64	-0.02	ns.
No. of Psychiatric Assessments	315	0.16	<.006
No. of Institutional Transfers	315	0.30	<.001

Table 17.

First Psychiatric Diagnosis for the High and Low Psychopathy Groups.

Psychiatric diagnoses	Psychopathy group Low (%)	High (%)
No personality disorder or not dangerous	7 (58.33)	4 (14.82)
Personality disorder not antisocial type	3 (25.00)	3 (11.11)
Personality disorder antisocial type	2 (16.67)	20 (74.07)
Total	12 (100.0)	27 (100.0)

Table 18.

All Psychiatric Diagnoses for the High and Low Psychopathy Groups.

	Psychopathy group			
Psychiatric diagnoses	Low	(%)	High	(%)
No personality disorder or not dangerous	12	(63.2)	6	(12.5)
Personality disorder not antisocial type	5	(26.3)	8	(16.7)
Personality disorder antisocial type	2	(10.5)	34	(70.8)
Total	19	(100.0)	48	(100.0)

11. Future Plans

Based on file information, the reviewer rated the future plans of the inmate as (1) "realistic" if the plan appeared to be well thought-out and compatible with the educational level and past work performances of the inmate; (2) "grandiose", if the plan was grossly incompatible with his educational level (eg., an inmate with a grade 8 education and not involved in any upgrading, wants to be a lawyer when he gets out); and (3) "no motivation to change", if the inmate was not involved in any educational or vocational upgrading and had made no obvious attempt to change his lifestyle. Categories (2) and (3) were collapsed in the analysis. There is a highly significant association between HP group and categories (2) and (3) (chi square=29.0, df=1, p<.0001).

12. Education and employment

There is no significant association between the HP and LP groups for both education attained before incarceration (chi square= 0.37, df=1, ns) or education pursued during incarceration (chi square=0.00, df=1, ns). However, the type of employment prior to incarceration (stable, unstable, illegal) is significantly associated with the two groups, with the HP group involved in proportionally more unstable and illegal employment (chi square=46.2, df=2, p<.0001). When employment prior to incarceration is categorized as legal and illegal, a similar significant association was found (chi square=9.1, df=1, p<.003).

13. Offence severity as a function of age of inmate

It has been suggested (Robins,1966; Suedfild and Landon, 1978) that the antisocial behaviours of psychopaths often decrease after the age of 30. Hare and Jutai (in press) showed that psychopaths still accumulate a significantly larger number of charges per year free compared to non-psychopaths up to the age interval of 36-40. No data were available for higher age intervals. The present data document the temporal progression of the offence density of the LP and HP group as a function of age in terms of the number of convictions per year free as available in the RCMP Fingerprinting Service Record (FPS). The oldest age interval is 51 year plus. The N decreases at higher age intervals as fewer inmates are old enough to be included. The results are shown in Figure 2 and Table 19.

The patterns of criminal convictions for the two groups are remarkably different. The HP group shows a sharp increase in their conviction rate from when they were in their late teens to their early twenties and then decreases rapidly. Despite the sharp decrease, the number of convictions per year free between the two groups is still significantly different up to the age interval of 39-44. It is possible that, for the HP subjects, the sharp decrease in conviction rate in their late twenties may give the clinical impression that they are burning out. The HP group, when they approach 30 year old, may appear to have improved compared to their past behaviour. However, they are still significantly worse than the LP group up to about age 40.

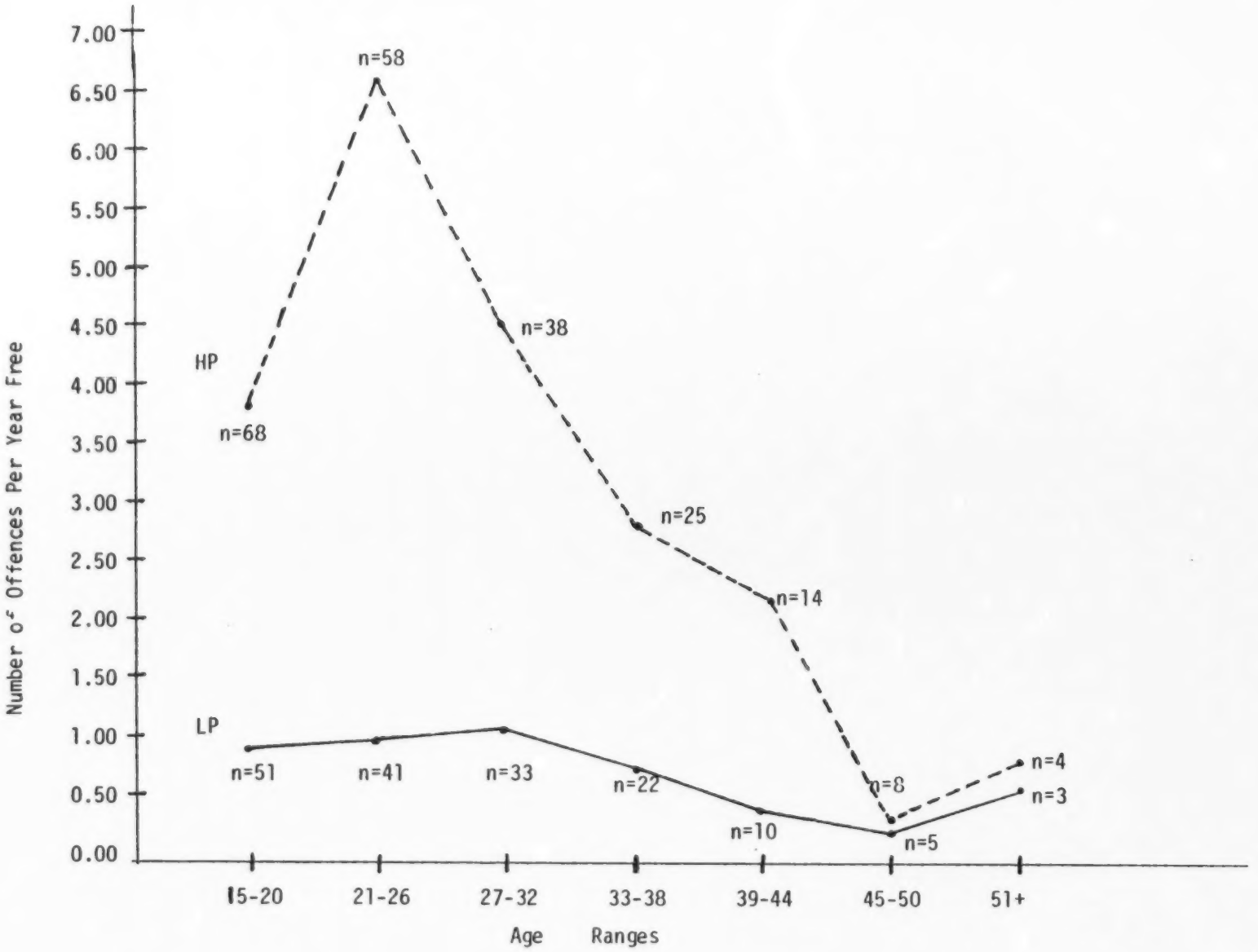


Fig 2. Number of offences per year free for high and low psychopathy groups as a function of age.

Table 19.

Number of Offences Per Year Free as a Function of HP and LP Group for Seven Age Ranges.

	Psychopathy groups						
Age Range	N	LP	N	HP	F-ratio	df	p
15-20	51	.97	68	3.81	15.55	1/117	<.0001
21-26	41	.98	58	6.54	16.11	1/97	<.0001
27-32	33	1.09	38	4.55	6.60	1/69	<.01
33-38	22	.73	25	2.85	6.02	1/45	<.02
39-44	10	.44	14	2.20	1.77	1/23	ns.
45-50	5	.26	8	.31	0.01	1/11	ns.
51+	3	.56	4	.83	0.19	1/5	ns.

Discussion

The data indicate that about 20% of the inmate population in the Correctional Service of Canada could be considered psychopaths. The proportion is significantly higher in the maximum security penitentiaries (30%) compared to the medium security ones (15%). This is probably due to both the nature of the crimes they committed (i.e., more violent) and transfers within the penitentiary system because of more aggressive and violent institutional behaviours. Psychopaths committed more institutional offences and used more violence and threats during the infractions.

The results of the present study support previous studies showing that psychopaths as a group committed more offences per year while free in the community, had trouble with the law at an earlier age and spent more time in prison as a consequence.

There is no significant association between racial background and being classified as a psychopath. Being native or white does not alter ones' chance of being considered as psychopathic.

Psychopaths and non-psychopaths did not differ in their birth order or their number of siblings. As a group, they were not any more likely to be abused as a child. However, they were more likely to be raised by someone other than one of their biological parents. They were more likely to have early behavioural problems and incidents of juvenile delinquency before the age of 15 and they left home at an earlier age.

There are significant positive correlations between the degree of psychopathy and parole revocations, MS revocations and incidents of UAL. Psychopaths as a group violated parole and MS more often and for more serious reasons (e.g., reoffending). Psychopaths also had significantly more UALs. Despite their rather notorious criminal and conditional release records, they were not any less likely to be given parole. This may be because many of them are better able to fake sincerity and convince parole board members of their willingness to change their ways.

The Psychopathy checklist was found to have good reliability among raters either with or without the recommended interview. The 15-item short form of the checklist is almost as reliable as the 22-item one.

Since the data are based on a random sample from an inmate population selected from minimum, medium and maximum institutions, the results can be generalized to other similar inmate populations.

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